

Patent Abstracts of Japan

PUBLICATION NUMBER : 10149688
 PUBLICATION DATE : 02-06-98

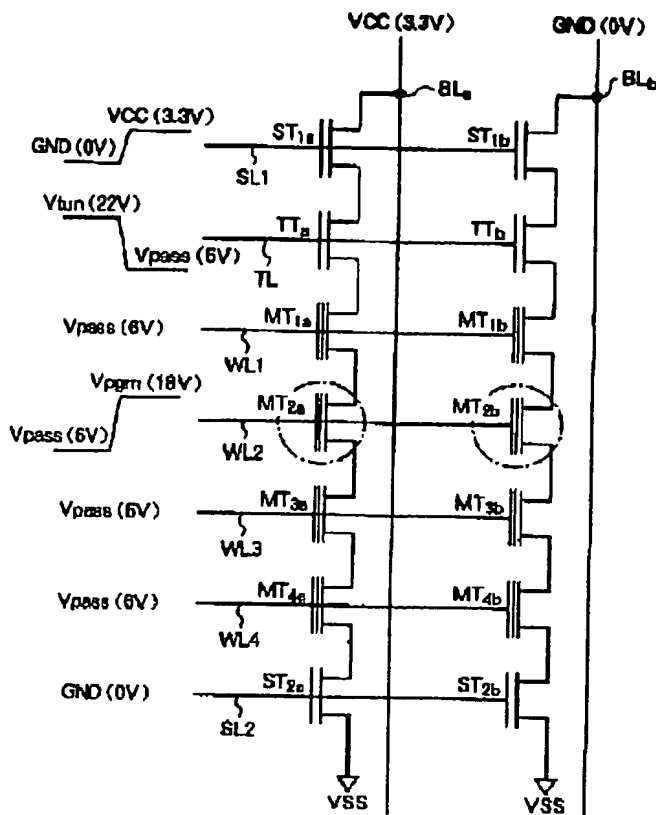
APPLICATION DATE : 20-11-96
 APPLICATION NUMBER : 08309760

APPLICANT : SONY CORP;

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INT.CL. : G11C 16/02 G11C 16/04

TITLE : SEMICONDUCTOR NON-VOLATILE
 STORAGE DEVICE AND ITS DATA
 PROGRAMMING METHOD



ABSTRACT : PROBLEM TO BE SOLVED: To provide an instrument which is suitable for single electric operation at low voltage, easy in the layout of data latch circuit for each bit line, and capable of data programming superior in disturb durability by impressing a program voltage on the selection word line by a specified processing and by applying a package page program to the memory TR connected to the selection word line.

SOLUTION: The ground voltage GND is impressed on NAND column selective lines SL1, SL2 to hold each NAND column channel section in a floating condition. In this condition, all word lines WL1 to WL4 are impressed with a pass voltage Vpass and the tunnel current controller TL is impressed with a high-potential pulse Vtun of width of about several microseconds. As the results, electrons are extracted from each NAND column channel section in the floating condition through tunneling TRs, TT_a to TT_b, by FN tunneling current to raise the potential of each NAND column channel section to the program inhibit voltage.

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